

CLAIMS:

1. A cutting tool, comprising:
a saw blade,
a blade case adapted to cover the saw blade and
a light disposed within the blade case, wherein the light is laterally displaced from the saw blade and the light is substantially aligned with a cutting line of a workpiece that will be cut by the saw blade during a cutting operation.
2. A cutting tool as in claim 1, further comprising a mounting device adapted to receive the light, wherein the mounting device is disposed within the blade case.
3. A cutting tool as in claim 2, wherein the blade case comprises a side portion that laterally opposes the saw blade and the mounting device is disposed within the side portion.
4. A cutting tool as in claim 3, wherein the mounting device comprises a cover member that substantially protects the light from the saw blade, wherein a gap is maintained to permit light to be directed to the portion of the workpiece that will be cut.
5. A cutting tool as in claim 4, wherein the lighting direction is substantially parallel to the saw blade.
6. A cutting tool as in claim 4, further comprising a power supply circuit adapted to supply power to the light, wherein the cover member defines a space for receiving the light and a portion of the power supply circuit.
7. A cutting tool as in claim 6, wherein the power supply circuit includes a socket and an electrical line extending from the socket, the socket being coupled to the mounting device, wherein the socket and a portion of the electrical line are disposed within the space of the cover member.
8. A cutting tool as in claim 1, further including a cooling device adapted to cool the light during operation.

9. A cutting tool as in claim 8, further including a motor for driving the saw blade and the cooling device also produces a flow of air to cool the motor, wherein at least one vent opening is formed in the blade case, cooling air is directed to flow into the blade case through the at least one vent opening and the cover member is arranged and configured to direct cooling air from the vent opening to flow across the light so as to cool the light.

10. A cutting tool as in claim 1, wherein the cutting tool is a portable circular saw, the saw blade is a circular saw blade and the light is laterally displaced from the circular saw blade along the rotational axis of the circular saw blade.

11. A cutting tool as in claim 10, further comprising:
a base adapted to contact the workpiece during the cutting operation and
a saw unit arranged and constructed to vertically pivot relative to the base, wherein the blade case is a portion of the saw unit and the blade case comprises at least one side portion that laterally opposes the circular saw blade and wherein the light is disposed within the side portion.

12. A cutting tool as in claim 11, further comprising a mounting device disposed within the side portion, the mounting device receiving the light.

13. A cutting tool as in claim 1, further comprising:
a base adapted to contact the workpiece during the cutting operation, wherein the blade case is adapted to vertically pivot relative to the base,
a handle coupled to the blade case and
a power supply circuit adapted to supply power to a motor and to the light, wherein elements of the power supply circuit are arranged to horizontally balance the cutting tool when the base extends substantially in a horizontal direction and the cutting tool is held by the handle.

14. A cutting tool as in claim 13, wherein the power supply circuit comprises a transformer that is disposed substantially in a vertical plane that extends through the handle.

15. A cutting tool as in claim 14, further including a power switch and a lighting switch mounted on the handle and being positioned adjacent to each other, the power switch being

operable to start the motor and the lighting switch being operable to turn on the light.

16. A cutting tool as in claim 1, wherein the cutting tool is a portable circular saw, the saw blade is a circular saw blade and the light is laterally displaced from the circular saw blade along the rotational axis of the circular saw blade, wherein the lighting direction is substantially parallel to the saw blade, the cutting tool further comprising:

a base adapted to contact the workpiece during the cutting operation,

a mounting device constructed to receive the light,

a saw unit arranged and constructed to vertically pivot relative to the base, wherein the blade case is a portion of the saw unit, the blade case comprises a side portion that laterally opposes the circular saw blade and the light and the mounting device are disposed within the side portion,

a handle coupled to the saw unit,

a cover member disposed to substantially protect the light from the saw blade, wherein a gap is maintained to permit light to be directed to the portion of the workpiece that will be cut,

a power supply circuit adapted to supply power to a motor and to the light, wherein elements of the power supply circuit are arranged to horizontally balance the cutting tool when the base extends substantially in a horizontal direction and the cutting tool is held by the handle, wherein the power supply circuit comprises a transformer that is disposed substantially in a vertical plane that extends through the handle and a socket and an electrical line extending from the socket, the socket being coupled to the mounting device, wherein the socket and a portion of the electrical line are disposed within a space defined within the cover member,

a power switch mounted on the handle and operable to start the motor and

a lighting switch mounted on the handle and being positioned adjacent to the power switch, the lighting switch being operable to turn on the light.

17. A cutting tool as in claim 16, further including a cooling device adapted to cool the light during operation and to produce a flow of air to cool the motor, wherein at least one vent opening is formed in the blade case, cooling air is directed to flow into the blade case through the at least one vent opening and the cover member is arranged and configured to direct cooling air from the vent opening to flow across the light so as to cool the light.

18. A cutting tool comprising:
a saw blade,
a blade case adapted to cover the saw blade,
a motor housing adapted to accommodate a motor for driving the saw blade,
wherein the blade case and the motor housing are formed separately from each other and are adapted to be joined to each other along a joining line,
a light adapted to illuminate a portion of a workpiece that will be cut by the saw blade during a cutting operation, wherein the light is laterally displaced from the saw blade,
a power supply circuit adapted to supply power to the light, wherein the power supply circuit comprises a first circuit portion disposed within the motor housing and a second circuit portion disposed within the blade case and
a coupling connecting the first circuit portion and the second circuit portion.
19. A cutting tool as in claim 18, further including a mounting device disposed within the blade case and receiving the light.
20. A cutting tool as in claim 18, wherein the coupling is operable to connect the first circuit portion and the second circuit portion from the outer side of the tool after the motor housing and the blade case have been joined to each other.
21. A cutting tool as in claim 20, further comprising:
a recess formed in an outer surface of the cutting tool adjacent to the joining line that accommodates the coupling and
a coupling cover that covers the coupling from the outside when the coupling is accommodated within the recess.
22. A cutting tool as in claim 18, wherein the coupling is adapted to automatically connect the first and second circuit portions at the same time that the blade case and the motor housing are joined to each other.
23. A method of illuminating a portion of a workpiece that will be cut by a cutting tool, the cutting tool including a saw blade, a blade case adapted to cover the saw blade and a light disposed within the blade case in a position displaced laterally from the saw blade, the method comprising:

illuminating the portion of the work piece that will be cut by the cutting tool using the light during a cutting operation.

24. A method as in claim 23, wherein the cutting tool further comprises a mounting device disposed within the blade case, wherein the light is received by the mounting device.

25. A method as in claim 24, wherein the blade case comprises at least one side portion that laterally opposes the saw blade and the mounting device is disposed on the side portion.